

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (Currently Amended): A heat exchanger comprising:
a header pipe including a fluid circulation hole inside thereof;
an inlet manifold including an inlet hole inside thereof;
an outlet manifold including an outlet hole inside thereof;
a first coupling member including a first coupling hole inside thereof; and
a second coupling member including a second coupling hole inside thereof;
wherein a first end ~~one end~~ of the first coupling member is ~~being~~ connected to a first end ~~one end~~ of the header pipe and a second ~~the other~~ end of the first coupling member is being connected to the inlet manifold; and manifold,
a second coupling member including a second coupling hole inside thereof, wherein a first end ~~one end~~ of the second coupling member is being connected to a second ~~the other~~ end of the header pipe and a second ~~the other~~ end of second coupling member is being connected to the outlet manifold,
wherein in the first coupling member, a first end ~~one end~~ of the first coupling hole is opened to a first end ~~one end~~ of the fluid circulation hole and ~~the other~~ a second end of the first coupling hole is opened to the inlet hole, and
wherein in the second coupling member, a first end ~~one end~~ of the second coupling hole is opened to a second ~~the other~~ end of the fluid circulation hole and ~~the other~~ a second end of the second coupling hole is opened to the outlet hole,
wherein a first pipe side connection hole, which has a diameter that is larger than that of the first end of the fluid circulation hole and which is for housing the first end of the first coupling member, is formed on the first end of the header pipe, and
wherein a second pipe side connection hole, which has a diameter that is larger than that of the second end of the fluid circulation hole and which is for housing the first end of the second coupling member, is formed on second end of the header pipe.
2. (Canceled).

3. (Currently Amended): The heat exchanger according to claim 1, wherein a first manifold side connection hole for housing the ~~other~~ second end of the first coupling member is formed on a side surface of the inlet manifold, and wherein a second manifold side connection hole for housing the second ~~other~~ end of the second coupling member is formed on a side surface of the outlet manifold.

4. (Currently Amended): The heat exchanger according to claim 1, wherein the first coupling member includes a plurality of ~~of the~~ first coupling holes, and wherein the second coupling member includes a plurality of ~~of the~~ second coupling holes.

5. (Currently Amended): ~~The heat exchanger according to claim 4,~~ A heat exchanger comprising:

a header pipe including a fluid circulation hole inside thereof;

an inlet manifold including an inlet hole inside thereof;

an outlet manifold including an outlet hole inside thereof;

a first coupling member including a first coupling hole inside thereof; and

a second coupling member including a second coupling hole inside thereof;

wherein a first end of the first coupling member is connected to a first end of the header pipe and a second end of the first coupling member is connected to the inlet manifold,

wherein a first end of the second coupling member is connected to a second end of the header pipe and a second end of second coupling member is connected to the outlet manifold,

wherein in the first coupling member, a first end of the first coupling hole is opened to a first end of the fluid circulation hole and a second end of the first coupling hole is opened to the inlet hole,

wherein in the second coupling member, a first end of the second coupling hole is opened to a second end of the fluid circulation hole and a second end of the second coupling hole is opened to the outlet hole,

wherein the first coupling member includes a plurality of first coupling holes,

wherein the second coupling member includes a plurality of second coupling holes,

and

wherein the plurality of first coupling holes have different diameters from each other.

6. (Currently Amended): The heat exchanger according to claim 4, wherein all ~~the plurality of~~ of the first coupling holes have identical diameters.

7. (Currently Amended): ~~The heat exchanger according to claim 4, A heat exchanger comprising:~~

a header pipe including a fluid circulation hole inside thereof;
an inlet manifold including an inlet hole inside thereof;
an outlet manifold including an outlet hole inside thereof;
a first coupling member including a first coupling hole inside thereof; and
a second coupling member including a second coupling hole inside thereof;
wherein a first end of the first coupling member is connected to a first end of the header pipe and a second end of the first coupling member is connected to the inlet manifold,
wherein a first end of the second coupling member is connected to a second end of the header pipe and a second end of second coupling member is connected to the outlet manifold,
wherein in the first coupling member, a first end of the first coupling hole is opened to a first end of the fluid circulation hole and a second end of the first coupling hole is opened to the inlet hole,
wherein in the second coupling member, a first end of the second coupling hole is opened to a second end of the fluid circulation hole and a second end of the second coupling hole is opened to the outlet hole,
wherein the first coupling member includes a plurality of first coupling holes,
wherein the second coupling member includes a plurality of second coupling holes,
and
wherein the plurality of second coupling holes have different diameters from each other.

8. (Currently Amended): The heat exchanger according to claim 4, wherein all ~~the plurality of~~ of the second coupling holes have identical diameters.

9. (Currently Amended): The heat exchanger according to claim 4, wherein the header pipe includes a plurality of ~~of the~~ fluid circulation holes.

10. (Currently Amended): ~~The heat exchanger according to claim 9, A heat exchanger comprising:~~

a header pipe including a fluid circulation hole inside thereof;

an inlet manifold including an inlet hole inside thereof;

an outlet manifold including an outlet hole inside thereof;

a first coupling member including a first coupling hole inside thereof; and

a second coupling member including a second coupling hole inside thereof;

wherein a first end of the first coupling member is connected to a first end of the header pipe and a second end of the first coupling member is connected to the inlet manifold,

wherein a first end of the second coupling member is connected to a second end of the header pipe and a second end of second coupling member is connected to the outlet manifold,

wherein in the first coupling member, a first end of the first coupling hole is opened to a first end of the fluid circulation hole and a second end of the first coupling hole is opened to the inlet hole,

wherein in the second coupling member, a first end of the second coupling hole is opened to a second end of the fluid circulation hole and a second end of the second coupling hole is opened to the outlet hole,

wherein the first coupling member includes a plurality of first coupling holes,

wherein the second coupling member includes a plurality of second coupling holes,

wherein the header pipe includes a plurality of fluid circulation holes,

wherein the first coupling member is a single member including the plurality of first coupling holes opened to respective first ends ~~one ends~~ of the plurality of fluid circulation holes.

11. (Currently Amended): The heat exchanger according to ~~claim 9,~~ claim 10, wherein the second coupling member is a single member including the plurality of second coupling holes opened to respective second ends ~~other ends~~ of the plurality of fluid circulation holes.

12. (Currently Amended): The heat exchanger according to claim 9, wherein the first coupling members are equal in number ~~prepared in the number equivalent to the number~~ of the fluid circulation holes, and wherein each of the first coupling members includes a first ~~the first~~ coupling hole opened to a respective ~~one end of each of the~~ fluid circulation holes hole.

13. (Currently Amended): The heat exchanger according to claim 9, wherein the second coupling members are equal in number ~~prepared in the number equivalent to the~~ number of the fluid circulation holes, and wherein each of the second coupling members includes a second ~~the second~~ coupling hole opened to a respective ~~the other end of each of the fluid circulation holes~~ hole.

14. (New): The heat exchanger according to claim 5, wherein the plurality of second coupling holes have different diameters from each other.

15. (New): The heat exchanger according to claim 12, wherein the second coupling members are equal in number to the number of the fluid circulation holes, and wherein each of the second coupling members includes a second coupling hole opened to a respective fluid circulation hole.